



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,723	11/21/2001	Roy P. McMahon	R98152	5337

7590

06/04/2003

Raytheon Company
Bldg. EO/E01/E150
2000 East El Segundo Boulevard
P.O. Box 902
El Segundo, CA 90245

EXAMINER

MAYO III, WILLIAM H

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,723

Applicant(s)

MCMAHON, ROY P.

Examiner

William H. Mayo III

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 22 April 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The corrected or substitute drawings were received on April 22, 2003. These drawings are approved.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 9, 11-14, 17-18, 20, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Griffin (Pat Num 5,864,094). Griffin discloses an electrical cable (Figs 1-4) having a local longitudinal axis (center of cable) useful in supplying AC electrical power to audio equipment (Col 1, lines 51-53). With respect to claim 1, Griffin discloses an electrical cable (Figs 1-4) comprising a central conductor structure (i.e. coaxial cable positioned in the center of the cable) that has an electrically conducting central conductor (52), a layer of central conductor insulation (54) overlying the central conductor (52), and an electrically conducting central conductor shield (56) overlying the layer of central conductor insulation (54), wherein the cable (Fig 2) comprises a plurality of spiral conductor structures (60, 62) overlying and spirally wrapped around the central conductor structure (center coaxial cable, see Fig 3), wherein each spiral conductor (60,

Art Unit: 2831

62) retains a same pair of circumferentially adjacent other spiral conductor structure (adjacent 60 & 62's) along the length of the cable (50, Fig 3) and wherein each of the spiral conductor structures (20, as shown in Fig 4) comprises an electrical conducting spiral conductor (25, Col 4, lines 30-35), a spiral conductor insulation (24) overlying the spiral conductor (20), wherein each spiral conductor structure (20) has no electrically conducting shielding thereon, and wherein the cable (50) further comprises an electrically conducting outer shield (72) overlying the plurality of spiral conductors (60, 62, Fig 2) and an outer insulation (74) overlying the electrically conducting outer shield (72). With respect to claim 2, Griffin discloses that the electrical cable (50) is substantially circular viewed in cross section perpendicular to the local longitudinally axis (center of cable, Fig 2). With respect to claim 3, Griffin discloses that the center conductor (52) may be a plurality of electrical conducting central conductor wires (Col 5, lines 59-62). With respect to claim 4, Griffin discloses that the central conductor structure (center coaxial cable) is a coaxial wire structure (Fig 2). With respect to claim 5, Griffin discloses that the spiral conductor (20 as shown in Fig 4) comprises a plurality of electrically conducting spiral conductor wires (25). With respect to claim 6, Griffin discloses that the plurality of spiral conductor structures are each of the substantially the same diameter (Fig 2, Col 6, lines 16-19). With respect to claim 9, Griffin discloses that each spiral conductor structure (60, 62) has a designated identity (line and neutral conductors respectively), wherein the circumferential arrangement of each spiral conductor (60, 62) is selected responsive to its designated identity (line and neutral conductors) and to the designated identities of each pair of circumferentially adjacent

Art Unit: 2831

spiral conductor structures (adjacent 60 & 62's, Cols 3 & 5, lines 49-53 & 20-42, respectively). With respect to claim 11, Griffin discloses an electrical cable (Fig 2) electrical cable (Figs 1-4) comprising a central conductor structure (i.e. coaxial cable positioned in the center of the cable) that has an electrically conducting central conductor (52), a layer of central conductor insulation (54) overlying the central conductor (52), and an electrically conducting central conductor shield (56) overlying the layer of central conductor insulation (54), wherein the cable (Fig 2) comprises a plurality of spiral conductor structures (60, 62) overlying and spirally wrapped around the central conductor structure (center coaxial cable, see Fig 3), wherein each of the spiral conductor structures (20, as shown in Fig 4) comprises an electrical conducting spiral conductor (25, Col 4, lines 30-35), a spiral conductor insulation (24) overlying the spiral conductor (20), wherein each spiral conductor structure (20) has no electrically conducting shielding and wherein each spiral conductor (60, 62) retains a same pair of circumferentially adjacent other spiral conductor structure (adjacent 60 & 62's) along the length of the cable (50, Fig 3) and wherein each spiral conductor structure (60, 62) has a designated identity (line and neutral conductors respectively), and wherein the circumferential arrangement of each spiral conductor (60, 62) is selected responsive to its designated identity (line and neutral conductors) and to the designated identities of each pair of circumferentially adjacent spiral conductor structures (adjacent 60 & 62's, Cols 3 & 5, lines 49-53 & 20-42, respectively), and wherein the cable (50) further comprises an electrically conducting outer shield (72) overlying the plurality of spiral conductors (60, 62, Fig 2) and an outer insulation (74) overlying the electrically

conducting outer shield (72), wherein the electrical cable (50) is substantially circular viewed in cross section perpendicular to the local longitudinally axis (center of cable, Fig 2). With respect to claim 12, Griffin discloses that the center conductor (52) may be a plurality of electrical conducting central conductor wires (Col 5, lines 59-62). With respect to claim 13, Griffin discloses that the spiral conductor (20 as shown in Fig 4) comprises a plurality of electrically conducting spiral conductor wires (25). With respect to claim 14, Griffin discloses that the plurality of spiral conductor structures are each of the substantially the same diameter (Fig 2, Col 6, lines 16-19). With respect to claim 17, Griffin discloses a method of preparing an electrical cable (Figs 1-4) comprising the steps of providing a central conductor structure (i.e. coaxial cable positioned in the center of the cable) that has an electrically conducting central conductor (52), a layer of central conductor insulation (54) overlying the central conductor (52), and an electrically conducting central conductor shield (56) overlying the layer of central conductor insulation (54), providing a plurality of spiral conductor structures (60, 62) overlying and spirally wrapped around the central conductor structure (center coaxial cable, see Fig 3), wherein each of the spiral conductor structures (20, as shown in Fig 4) comprises an electrical conducting spiral conductor (25, Col 4, lines 30-35), a spiral conductor insulation (24) overlying the spiral conductor (20), wherein each spiral conductor structure (20) has no electrically conducting shielding thereon, selecting a circumferential arrangement of each spiral conductor (60, 62) responsive to its designated identity and to the designated identities of each of a pair of circumferentially adjacent spiral conductor structures along a length of the cable (50), placing an

Art Unit: 2831

electrically conducting outer shield (72) overlying the plurality of spiral conductors (60, 62, Fig 2) placing an outer insulation (74) overlying the electrically conducting outer shield (72) to form the cable (50) having a local longitudinal axis (center of cable, Cols 3 & 5, lines 49-53 & 20-42, respectively). With respect to claim 18, Griffin discloses a method of preparing an electrical cable (50), wherein the plurality of spiral conductor structures are each of the substantially the same diameter (Fig 2, Col 6, lines 16-19). With respect to claim 20, Griffin discloses a method of preparing an electrical cable (50), wherein the electrical cable (50) is substantially circular viewed in cross section perpendicular to the local longitudinal axis (center of cable, Fig 2). With respect to claim 29, Griffin discloses an electrical cable (Fig 2) electrical cable (Figs 1-4) having a local longitudinal axis (center of cable) comprising a central conductor structure (i.e. coaxial cable positioned in the center of the cable) that has an electrically conducting central conductor (52), a layer of central conductor insulation (54) overlying the central conductor (52), and an electrically conducting central conductor shield (56) overlying the layer of central conductor insulation (54), wherein the cable (Fig 2) comprises a plurality of spiral conductor structures (60, 62) overlying and spirally wrapped around the central conductor structure (center coaxial cable, see Fig 3), wherein each of the spiral conductor structures (20, as shown in Fig 4) comprises an electrical conducting spiral conductor (25, Col 4, lines 30-35), a spiral conductor insulation (24) overlying the spiral conductor (20), wherein each spiral conductor structure (20) has no electrically conducting shielding and wherein each spiral conductor (60, 62) retains a same pair of circumferentially adjacent other spiral conductor structure (adjacent 60 & 62's) along the

Art Unit: 2831

length of the cable (50, Fig 3) and wherein each spiral conductor structure (60, 62) has a designated identity (line and neutral conductors respectively), and wherein the circumferential arrangement of each spiral conductor (60, 62) is selected responsive to its designated identity (line and neutral conductors) and to the designated identities of each pair of circumferentially adjacent spiral conductor structures (adjacent 60 & 62's, Cols 3 & 5, lines 49-53 & 20-42, respectively), and wherein the cable (50) further comprises an electrically conducting outer shield (72) overlying the plurality of spiral conductors (60, 62, Fig 2) and an outer insulation (74) overlying the electrically conducting outer shield (72).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7, 10, 15-16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin (Pat Num 5,864,094) in view of Hansen et al (Pat Num 3,829,603, herein referred to as Hansen). Griffin discloses an electrical cable (Figs 1-4) having a local longitudinal axis (center of cable) useful in supplying AC electrical power to audio equipment (Col 1, lines 51-53) as disclosed above with reference to claims 1, 11, & 17 above.

However, Griffin doesn't necessarily disclose the plurality of spiral conductor structures having different diameters (claims 7, 15, & 19), nor the cable comprising a spiral spacer structure spirally wrapped around the central conductor and lying between two spiral conductor structures in side by side relationship (claims 10 & 16).

Hansen teaches an electrical cable (Figs 1-2) having increased flexibility (Col 1, lines 20-23). Specifically, with respect to claims 7 & 15, Hansen teaches an electrical cable (10) having a plurality of spiral conductors (17-19 & 31-33, i.e. power conductors and ground conductors respectively), wherein the plurality of spiral conductors (17-19 & 31-33) have different diameters (Fig 1). With respect to claim 10 & 16, Hansen teaches that a spiral spacer (27) is spiral wrapped around a central conductor structure (26), wherein the spiral spaces (27-29) are positioned between two spiral conductors (15 & 31) in a side-by-side relationship (Fig 1). With respect to claim 19, Hansen teaches a method wherein at least some of the plurality of spiral conductors (17-19 & 31-33) has different diameters (Fig 1).

With respect to claims 7, 15, & 19, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the plurality of spiral conductors of Griffin to comprise at least some of the plurality of spiral conductors having different diameters as taught by Hansen because Hansen teaches that such a configuration provides an electrical cable having increased flexibility (Col 1, lines 20-23) and since it has been held that such a modification would have involved a mere change in size of a component and a change of size is generally recognized as being within the ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

With respect to claims 7, 15, & 19, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the plurality of spiral conductors of Griffin to comprise spiral spaces positioned between two spiral conductors as taught by Hansen because Hansen teaches that such a configuration provides an electrical cable having increased flexibility (Col 1, lines 20-23).

6. Claims 21-28 and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin (Pat Num 5,864,094) in view of Applicant's Own Admission of Prior Art (herein referred to as AOAPA). Griffin discloses an electrical cable (Figs 1-4) having a local longitudinal axis (center of cable) useful in supplying AC electrical power to audio equipment (Col 1, lines 51-53) as disclosed above with reference to claim 1 above. Specifically, with respect to claim 21-24, Griffin discloses a plurality of spiral conductor structures (60, 62) overlying and spirally wrapped around the central conductor structure (center coaxial cable, see Fig 3). With respect to claim 26-28, Griffin discloses a method of providing a plurality of spiral conductor structures (60, 62) overlying and spirally wrapped around the central conductor structure (center coaxial cable, see Fig 3). With respect to claim 30, Griffin discloses an electrical cable (Fig 2) having a local longitudinal axis (center of cable) comprising a central conductor structure (i.e. coaxial cable positioned in the center of the cable) that has an electrically conducting central conductor (52), a layer of central conductor insulation (54) overlying the central conductor (52), and an electrically conducting central conductor shield (56) overlying the layer of central conductor insulation (54), wherein the cable (Fig 2) comprises a plurality of spiral conductor structures (60, 62) overlying

and spirally wrapped around the central conductor structure (center coaxial cable, see Fig 3), wherein each of the spiral conductor structures (20, as shown in Fig 4) comprises an electrical conducting spiral conductor (25, Col 4, lines 30-35), a spiral conductor insulation (24) overlying the spiral conductor (20), wherein each spiral conductor structure (20) has no electrically conducting shielding and wherein each spiral conductor (60, 62) retains a same pair of circumferentially adjacent other spiral conductor structure (adjacent 60 & 62's) along the length of the cable (50, Fig 3) and wherein each spiral conductor structure (60, 62) has a designated identity (line and neutral conductors respectively), and wherein the circumferential arrangement of each spiral conductor (60, 62) is selected responsive to its designated identity (line and neutral conductors) and to the designated identities of each pair of circumferentially adjacent spiral conductor structures (adjacent 60 & 62's, Cols 3 & 5, lines 49-53 & 20-42, respectively), and wherein the cable (50) further comprises an electrically conducting outer shield (72) overlying the plurality of spiral conductors (60, 62, Fig 2) and an outer insulation (74) overlying the electrically conducting outer shield (72). With respect to claim 31, Griffin discloses that each spiral conductor (60, 62) retains a same pair of circumferentially adjacent other spiral conductor structure (adjacent 60 & 62's) along the length of the cable (50, Fig 3).

However, Griffin doesn't necessarily disclose at least one of the spiral conductor structures having a signal carrying identity (claim 21), nor at least some of the spiral conductor structures having different signal carrying identities (claim 22), nor at least some of the spiral conductor structures being arranged responsive to cross-talk threat

Art Unit: 2831

between various spiral conductor structures (claim 23), nor at least some of the spiral conductor structures having an identity selected to a designed carried signal selected from the group consisting of video, audio, power, telephone, data, or control signals (claims 24, 28, & 34), nor the electrical cable being a component of in flight entertainment system (claim 25), nor the method of arranging the spiral conductor structures responsive to a power carried by each spiral conductor and circumferentially adjacent pair of spiral conductor structures (claim 26), nor the method of arranging the spiral conductor structures responsive to a cross-talk characteristic (claim 27), nor the circumferential positioning of the spiral conductors relative to each other being responsive to a signal carried by each other spiral conductor structure (claims 30 & 33).

AAOPA teaches, under the heading Background of The Invention, electrical cables that are known and that carry a number of different types of electrical signals (Page 2, lines 13-17). Specifically, with respect to claims 21-22, AOAPA teaches an known electrical cable for usage with a in flight entertainment (IFE) system in an airliner wherein at least one of the conductor structures having different signal carrying identities (i.e. video, audio, power, telephone, data, or control signal identity (Page 2, lines 16-20). With respect to claim 23, AOAPA teaches that it is well known to arrange conductor structures with response to cross-talk threat between various adjacent conductor structures by assigning specific conductors to specific positions in order to minimize the coupling of the conductors and the possibility of cross-talk (Page 1, lines 23-28). With respect to claims 24-25, 28, & 34, AOAPA teaches an known electrical cable for usage with a in flight entertainment (IFE) system in an airliner

Art Unit: 2831

wherein at least one of the conductor structures having different signal carrying identities (i.e. video, audio, power, telephone, data, or control signal identity (Page 2, lines 16-20). With respect to claims 26-27, AOAPA teaches a well-known method of arranging conductor structures with response to cross-talk threat between various adjacent conductor structures by assigning specific conductors to specific positions in order to minimize the coupling of the conductors and the possibility of cross-talk (Page 1, lines 23-28). With respect to claims 30 & 33, AOAPA teaches that it is well known to arrange conductor structures with response to cross-talk threat between various adjacent conductor structures by assigning specific conductors to specific positions in order to minimize the coupling of the conductors and the possibility of cross-talk (Page 1, lines 23-28).

With respect to claims 21-28 and 30-33, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the cable of Griffin to comprise at least one or more signal conductor configuration as taught by AOAPA because AOAPA teaches that such a configuration reduces the possibility of cross talk and minimizes the coupling of adjacent conductors (Page 1, lines 23-28) and are well known in the art for usage with a in flight entertainment (IFE) system in an airliner wherein at least one of the conductor structures having different signal carrying identities (i.e. video, audio, power, telephone, data, or control signal identity (Page 2, lines 16-20) and it appears that Griffin would perform with or without the modification.

Response to Arguments

7. Applicant's arguments filed April 22, 2003 have been fully considered but they are not persuasive. The applicant argues the following:

- A) Griffin has no disclosure each spiral conductor structure retains a same pair circumferentially of adjacent spiral conductors along a length of the electrical cable and therefore cannot anticipate claims 1, 11, & 17.

With respect to argument A, the examiner respectfully traverses. Firstly, it is unclear how the applicant can state "that the conductors arrangement would not be preserved throughout the entire cable length". Clearly, as shown in Figure 3, the conductors (20, 22) are arranged and spirally wrapped in a consistent pattern to ensure that the conductor arrangement is maintained throughout the entire cable length (Griffin discloses that the construction of the power cable is substantially identical to the power cable 10, Col 5, lines 52-54). The drawings are considered to be a part of the disclosure and it has been held that the drawings must be evaluated for what they reasonably disclose and suggest to one of ordinary skill in the art. In re Aslanian, 590 F. 2d 911, 200 USPQ 500 (CCPA 1979). Secondly, Griffin also clearly states that

"Preferably, the plurality of line conductors are disposed circumferentially side by side with respect to each other about the center ground conductor. Likewise, the plurality of neutral conductors are disposed circumferentially side by side with respect to each other about the central ground conductor and disposed opposite from the line conductors" (Col 2, lines 1-6).

Griffin also states that the

“All of the insulating material layers used in the power cable of the present invention are preferably formed of semi rigid, substantially non compressible material, such as PCV, to prevent movement of the individual conductors with respect to each other within the power cable (Col 2, lines 12-15).

Therefore, Griffin clearly teaches that the conductors are disposed side by side, spirally wrapped around the ground conductor, and maintained in a state in which the conductors are prevented from movement with respect to each other, therefore ensuring that the configuration shown in Figures 2-3 are maintained, and therefore ensuring that each spiral conductor structure retains a same pair of circumferentially adjacent spiral conductors along a length of the electrical cable. In light of the above comments, the examiner respectfully submits that the 35 USC 102(b) rejection of claims 1-6, 9, 11-14, 17-18, 20, and 29 is proper and just.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Olsson et al (Pat Num 5,808,239), Naylor et al (Pat Num 5,491,299), Troxel et al (Pat Num 3,310,286), Seynhaeve et al (Pat Num 5,408,560), Magnan (Pat Num 4,767,890), Malneritch et al (Pat Num 2,953,627), and Horie et al (Pat Num 5,659,152), , all of which disclose electrical cables having several configurations.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2831

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (703) 306-9061. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308-3682. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3431 for After Final communications.

Art Unit: 2831

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to be "William III", written over a circular stamp.

WHM III
May 29, 2003